

REMARKS

In the Office Action dated October 18, 2005, claims 1, 2, 4, 8, 9, 11, 15, 16 and 18 were rejected under 35 U.S.C. 102(e) as allegedly being anticipated by U.S. Patent Number 6,870,311 B2 ("Mueller-1"). In addition, claims 1-20 were rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over PCT International Application Publication Number WO 01/24229 A2 ("Mueller-2") in view of Mueller 1.

In response, Applicants have amended the independent claims 1, 8 and 15 to more clearly distinguish the claimed invention from the cited references. In addition, claims 3, 10, 13, 17 and 20 have been amended. As explained below, Applicants respectfully assert that the amended independent claims 1, 8 and 15 are neither anticipated by Mueller-1 nor unpatentable over Mueller-2 in view of Mueller-1.

Furthermore, Applicants respectfully assert that the dependent claims 3, 5, 6, 10, 12, 13, 17, 19 and 20 are also not unpatentable over Mueller-2 in view of Mueller-1. In view of the claim amendments and the following remarks, Applicants respectfully assert that the pending claims 1-20 are now in condition for allowance.

A. Patentability of Amended Independent Claims 1, 8 and 15

The original independent claims 1, 8 and 15 were rejected under 35 U.S.C. 102(e) as allegedly being anticipated by the cited reference of Mueller-1.

Furthermore, the original independent claims 1, 8 and 15 were rejected under 35

U.S.C. 103(a) as allegedly being unpatentable over Mueller-2 in view of Mueller-1.

In response, Applicants have amended the independent claims 1, 8 and 15 to more clearly distinguish the claimed invention from the cited references. Specifically, the independent claims 1, 8 and 15 have been amended to include the limitation of "*said Group IIB element Selenide-based phosphor material being activated by at least one element selected from a group consisting of Copper, Chlorine, Fluorine, Bromine and Silver.*" This limitation is not disclosed in the cited references of Mueller-1 and Mueller-2. Thus, the amended independent claim 1 is neither anticipated by the cited reference of Mueller-1 nor obvious in view of the cited references of Mueller-1 and Mueller-2.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); MPEP §2131. As amended, the independent claim 1 recites in part “a wavelength-shifting region” that includes “Group IIB element Selenide” that is “activated by at least one element selected from a group consisting of Copper, Chlorine, Fluorine, Bromine and Silver.” The cited reference of Mueller-1 does not disclose such a “wavelength-shifting region.” Thus, the amended independent claim 1 is not anticipated by the cited reference of Mueller-1.

As correctly stated in the Office Action on page 3, the cited reference of Mueller-1 does disclose “Zinc Selenide” and “Cadmium Selenide”. However, Mueller-1 does not disclose Zinc Selenide or Cadmium Selenide that is “activated by at least one element selected from a group consisting of Copper, Chlorine, Fluorine, Bromine and Silver,” as recited in the amended independent claim 1. Thus, the amended independent claim 1 is not anticipated by the cited reference of Mueller-1.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

As explained above, the amended independent claim 1 recites in part “a wavelength-shifting region” that includes “Group IIB element Selenide” that is “activated by at least one element selected from a group consisting of Copper, Chlorine, Fluorine, Bromine and Silver,” which is not disclosed in the cited reference of Mueller-1. Furthermore, as correctly stated in the Office Action on page 4, the cited reference of Mueller-2 does not disclose “a wavelength-shifting region including

Group IIB element Selenide-based phosphor material having a property to convert some of said first light to second light of a second peak wavelength in a red wavelength range." Consequently, the cited reference of Mueller-2 also does not disclose "a wavelength-shifting region" that includes "Group IIB element Selenide" that is "activated by at least one element selected from a group consisting of Copper, Chlorine, Fluorine, Bromine and Silver," as recited in the amended independent claim 1. Therefore, the cited references of Mueller-1 and Mueller-2 when combined DO NOT teach or suggest all the claim limitations of the amended independent claim 1. Thus, the Examiner has failed to establish a *prima facie* case of obviousness for the amended claim 1. As a result, the amended independent claim 1 cannot be rendered obvious in view of the cited references of Mueller-1 and Mueller-2.

The amended independent claims 8 and 15 recite similar limitations as the amended independent claim 1. Therefore, the above remarks are also applicable to these amended independent claims 8 and 15. As a result, Applicants respectfully assert that the amended independent claims 8 and 15 are also not anticipated by Mueller-1 nor obvious in view of Mueller-1 and Mueller-2.

B. Patentability of Dependent 3, 5, 6, 10, 12, 13, 17, 19 and 20

The dependent claims 3, 5, 6, 10, 12, 13, 17, 19 and 20 were rejected under U.S.C. 103(a) as allegedly being unpatentable over Mueller-2 in view of Mueller-1. In particular, the Office Action states that "Mueller et al. disclose the claimed invention except for the particular phosphor disclosed in each of the above claims" and that "[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to include the phosphors of the above claims, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416." Applicants respectfully disagree.

Applicants respectfully assert that the particular phosphor recited in each of the dependent claims 3, 5, 6, 10, 12, 13, 17, 19 and 20 is not merely a design choice since the combined use of the particular phosphors recited in these dependent claims

is not known. Therefore, the dependent claims 3, 5, 6, 10, 12, 13, 17, 19 and 20 cannot be rendered obvious in view of Mueller-1 and Mueller-2.

C. Patentability of Dependent Claims 2, 4, 7, 9, 11, 14, 16 and 18

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Each of the dependent claims 2, 4, 7, 9, 11, 14, 16 and 18 depends on one of the amended independent claims 1, 8 and 15. As such, these dependent claims include all the limitations of their respective base claims. Therefore, Applicants submit that these dependent claims are allowable for at least the same reasons as their  
10 respective base claims.

Applicants respectfully request reconsideration of the claims in view of the remarks made herein. A notice of allowance is earnestly solicited.

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Respectfully submitted,  
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